CITY OF RENTON

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2006 WSEC RESIDENTIAL COMPLIANCE CHECKLIST

THIS CHECKLIST MUST BE COMPLETED FOR ALL RESIDENTIAL NEW CONSTRUCTION AND ADDITIONS.

THIS CHECKLIST ALONG WITH THE APPROVED PLANS MUST BE KEPT ON THE JOB AT ALL TIMES. INSPECTORS CANNOT PERFORM INSPECTIONS WITHOUT IT.

 About this checklist: This checklist is not as involved as it looks, because you only use portions of it for a particular dwelling project. This should be thought of as a tool for learning the residential WSEC requirements.

Requirements are grouped by foundation, framing, insulation, and final inspection phases. This not only lets you know what you need to do but also when the inspector will be checking for particular requirements. Use the checklist to choose compliance options that best suit the economics and design of your project.

If you have questions, you may contact Jan Conklin at (425) 430-7276.

- 2. Responsibility for information: Although staff members will help you with general questions about completing this checklist, it is ultimately your responsibility to provide detailed information about heating systems, glazing, insulation, and other building specifications.
- **Page 1, Compliance Options:** Select one compliance option, your building must match the selected option requirements without exceptions or substitutions.
- **4. Pages 2 through 6:** Provide information as required but do not fill in the columns labeled "COMPLIANCE REQUIRED" or "INSPECTION APPROVED".

Since this checklist will be evaluated for completeness and accuracy, you can avoid unnecessary permit delays by carefully providing all required information. You may disregard items that don't address your particular building or equipment.

EFFECTIVE 7/1/2007

ALL RESIDENTIAL OCCUPANCIES

ALL FUEL TYPES

CHAPTER 6, PRESCRIPTIVE OPTIONS FOR ALL R OCCUPANCIES

INSTRUCTIONS:

- 1) Carefully review the requirements of each of the Options below. Choose an Option that best suits your dwelling design. Glazing percentage typically determines which Option to choose. Your building must match the selected Option requirements without exceptions or substitutions.
- 2) Disregard components or equipment that don't apply to your project. Your permit will be processed more efficiently if you provide all of the requested information.

SINGLE FAMILY

MULTI-FAMILY

		Standard Option		
Check appropriate box	OPT 1	OPT 4	OPT 3	OPT 5
GLAZING MAX: % OF FLOOR U-FACTOR- VERTICAL	10% .32	Unlimited .35	25% .40	Unlimited .35
U-FACTOR-Overhead (Skylights)	.58	.58	.58	.58
DOOR U-VALUE CEILINGS:	.20	.20	.20	.20
WITH ATTICS VAULTED*see below	R-38 R-30	R-38 R-30	R-38 R-30	R-38 R-30
WALLS: ABOVE GRADE BELOW GRADE	R-15	R-21	R-21	R-21
INTERIOR EXTERIOR	R-15 R-10	R-21 R-10	R-15 R-10	R-15 R-10
FLOOR:	R-30	R-30	R-30	R-30
SLAB ON GRADE:	R-10	R-10	R-10	R-10

R-values are for wood frame assemblies only

*Single rafter or joist vaulted ceilings where both (a) the distance between the top of the ceiling and the underside of the roof sheathing is less than 12 inches and (b) there is a minimum of 1-inch vented airspace above the insulation. This option is limited to 500 square feet of ceiling area for any one dwelling unit. All other single rafter or joist vaulted ceilings shall comply with the "ceiling with attics" requirements.

	FOUNDATION PHASE							
COM	IPLIANCE REQUIRE	INSPECTION APPROVED						
	1) Slab insulation R10 required. a. Exterior - See #21 & #34 b. Interior – from top of slab to bottom and then horizontal for a total of 24".							
	2) Radiant Slab	insulation R-10 requi	red under whole slab.					
	3) Thermal break(s) shall be placed in the slab between conditioned and unconditioned space checked below: a. dwelling/garageb. dwelling/connected spacec. slab edge and foundation wall							
		MECHAN	ICAL AND PLUMBING PHA	ASE				
	4) Exhaust vent	ilation shall be provide	ed for each dwelling unit as follows:					
	Location	Minimum CFM	Manufacturer and Model#	CFM (.1 W.G.)				
	Kitchen fan	100 CFM						
	Bathroom fan	65 CFM						
	Bathroom fan	65 CFM						
	Bathroom fan	65 CFM						
	Laundry fan	65 CFM						
	Whole house fan							
	80 CFM min (1-3	bedrooms)						
	100 CFM min (4 b	edrooms)						
	120 CFM min (5 bedrooms)							
Who	le house fan requ	ıired in all new hoા	uses/dwelling units and all addition	ons >500 square feet				
	5) Whole house Location	fan:	Sone rating (.1W.G.)					
	 a. Whole house fan: to be controlled by a readily accessible 24-hour clock timer with capability of continuous operation, manual and automatic controls set to exhaust 8 hours per day. b. Whole house fun shall be listing/labeled "for continuous use" c. Whole house fan wiring for control routed to central location d. Whole house fan shall be labeled "Whole House Ventilation (see operating instructions)" 							
	6) Mechanical e	exhaust fan ducts shal	I be \geq 4" and properly sized.					
	7) Mechanical exhaust fan ducts shall be insulated to R-4 in unconditioned spaces.							
	8) Mechanical f	resh air supply ducts s	shall be insulated to R-4 in conditioned	spaces.				

9) Provide heat loss calculations for heating system sizing. Heating system requirements will be met with the following: Mfr Model # Efficiency rating (AFUE)									
	Output		Fuel Type _		E	fficiency rating	(AFUE)		
10)			n air ducts shall ha cs listed in accorda		•		•		
11)	HVAC pler	nums,	supply, and return	air duct	s insulated	to R-8.			
12)	Water hea	ters sh	all have:						
			er, or gas shut-off abel on tank						
	c. Non-con	npress	ible R-10 pad (elec	etric in u	unheated s _i	oaces or on co	ncrete floors)		
	d. Tempera	ature s	setting of 120F						
				FRA	MING P	HASE			
13)			els such as plywoo	•				d	
11)			beled "EXPOSURE y required shall be:		TERIOR 0	r HUD APPRI	OVED.		
14)	_		s 1U <u><</u> .:		ons 2, 4 & 5	5U <u><</u> .4	0 Options 3		
				-					
15)	Window sp	ecifica	ations:						
	Г	Mani	ıfacturer		U-Factor	,			
	-	IVIAIIC	nacturer		0-i actor				
	-								
	-								
	- -								
	Ĺ								
40\	Cladials on	. a aifi a a	stione Mosimum I	l footo	. 50				
16)	Skylight sp	ecilica	tions – Maximum l	J-lactor	06. =		-		
	# of Skylig	hts	Manufacturer	Area	1	U-Factor			
							-		
_							_		
17)	Allowed gla	azing a	area is derived by c	lividing	the total gl	azing area of _	s	Q FT	
	by the tota	l floor	area of		SQ FT	our options			
			t exceed the glazin 1< 25% Option			ited Option:	k 5		
18)	Glazing air	leaka	ge measures shall	be met	as follows:				
			stops with sealant on the sealant of						
19)			e placed in concea						
.0)	1) Behind	showe	=	.sa pia					

 20) Standard air leakage is complete and installed in the following: between sole plate/subfloors wiring/plumbing/duct register penetrations rim joists/mud sills (heated lower floors) partition stud penetrations around window/door frames 	
INSULATION PHASE	
21) Exterior slab insulation shall be R-10 and approved for below grade use. 22) Walls, including rim joists, shall be insulated to: □ R-15 Option 1 □ R-21 Options 3 - 5 23) Interior below grade walls shall be insulated to: □ R-15 Options 1, 3 & 5 □ R-21 Option 4 24) Single Rafter or Joist vaulted ceilings shall be insulated to R-30. 25) Skylight wall insulation equivalent to the wall R-values. 26) Insulation baffles shall be placed in ceilings to maintain at least 1" ventilation space and extend 6" vertically above batts or 12" vertically above loosefill insulation. 27) Vapor retarders shall be installed toward the warm surface Select one option for floors, walls, and ceilings: □ Plywood w/exterior glue □ Poly ≥ 4 Mill □ Backed batts Walls: □ Poly ≥ 4 Mill □ Face-stapled backed batts □ PVA paint Ceilings: □ Not required where ventilation space > 12" above insulation □ Face stapled backed batts □ POly ≥ 4 Mill □ PVA paint	
FINAL PHASE	
FOR FINAL INSPECTION: COVERS TO BE REMOVED FROM EXHAUST FANS AND CAN LI SO INSPECTOR CAN VERIFY COMPLIANCE WITH CODE	GHTS
28) Envelope floors shall be insulated to R-30 all Options 29) Attic ceilings shall be insulated to R-38 all Options 30) Door systems shall meet: U-value = .20 (Metal insulated or fiberglass insulated only (wood doors do not meet this u-	value)
Door #1: #2) One exempt door allowed: #3) 31) Recessed lighting fixtures shall be IC rated and labeled under ASTM E283 with tested air leakage no slots or holes in cans, caulked or sealed between can and ceiling	age <u>< 2</u> .0 CFM,
32) Fresh air shall be provided for each dwelling unit as follows: Tested, screened, controllable, through wall port Vented window frames Integrated with a Central forced air furnace which delivers outside makeup air through ducting system and requires furnace fan to be controlled by a timer set at 8 hours/day	
 33) Fresh air shall be provided for each dwelling unit as follows: 1) Each bedroom 2) Each Recreation Room 3) Overall living area 4) Other "habitable" rooms 	

	34) Exposed foam insulation shall comply as follows: Protected w/metal or plastic flashing that extends below grade Be approved for subgrade, exterior use & properly installed.	
	35) Airflow between fresh air ports and whole house fan ensured by ½" undercut doors/grills.	
	36) Loosefill insulation OK if maximum ceiling slope not > 3 in 12 and there is ≥ 30" of clear distance from top of bottom chord to underside of roof sheathing at the roof ridge.	
	37) 6 mil black poly ground cover, lapped 12" at joints	
	38) Clearances shall meet listed, minimums between insulation and chimney	
	39) Attic hatch insulated to ceiling R-value and weather-stripped.	
	40) Attic access shall have wood dam to retain loose-fill insulation.	
	41) All exterior doors to be weather-stripped.	
	42) Heat pump thermostat shall have programmable capability.	
	43) Caulking is installed around light fixtures and flue penetrations.	
	44) Service hot & cold water piping to be insulated to R-4 in unconditioned spaces.	
	45) Service recirculation hot water piping shall be insulated per code.	
	46) Supply ducts shall have volume dampers to balance the system.	
	47) Thermostat for each HVAC system with range of 55-75 F.	
	48) Readily accessible, automatic or manual means provided to restrict or shut-off heating input to each zone or floor	
	49) Backup heat prohibits simultaneous operation of primary system.	
	50) Spot exhaust fans to have timer, dehumidistat, or switch.	
	51) Showers and lavatories shall limit flow to ≤ 3.0 gals per minute.	
	 52) Swimming pools shall have: a) Readily accessible ON/OFF switch to allow shutting off the heater or pump b) Pool Cover c) Piping insulation per code d) Controls to allow temperature range down to 65 degrees F 	
	53) All fireplaces shall have:a) 6 sq in comb. air supply duct with damper connected to fire boxb) Tight fitting ceramic glass or metal doorsc) Tight fitting flue damper	
	 54) Solid fuel burning appliances shall have: a) Tight fitting ceramic glass or metal doors b) Outside combustion air source directly connected to fire box c) Exceptions - see code 	
	55) Outdoor lighting permanently mounted to a residential building shall be high efficacy.	
PLAN	REVIEWER APPROVAL: DATE:	
FINAL	INSPECTION APPROVED:	
INICDE	CTED BV:	